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## Book Review: Living in a Contaminated World: Community Structures, Environmental Risks and Decision Frameworks

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law in international institutions that are rule-based (such as the EU and World Trade Organization) and those that depend on voluntary cooperation (such as the Organization for Economic Cooperation and Development and G8). He concludes that hard law does not easily coexist with soft law within a single institutional framework and also that, while hard law is most effective, soft law has its own advantages – it is flexible, can lead to innovation and can stimulate the creation of hard law.

Perhaps the most interesting discussion of soft normativity is found in the first chapter, in which Trebilcock and Kirton sum up the insights of the various contributions. The view of soft law, which arises from this book, is that it stands not as an alternative but as a complement to hard law, and that the soft/hard normativity distinction is more of a continuum than a dichotomy. Many contributors highlight how it has influenced behaviour, most notably public attitudes in the context of CSR and the forestry sector. Others emphasize how it serves as a testing ground for the development of hard law. That being said, hard law is still the privileged form of normativity.

On the whole, this book advances our understanding of the character of voluntary standards in sustainable development governance. However, it should be noted that the quality of the contributions is uneven, as is too often the case in edited volumes, especially as regards their links to the central analytical questions of the book regarding the use of soft law. Moreover, multi-disciplinary efforts often turn out to have both negative and positive aspects: while the authors' different perspectives give rise to a lively debate, little effort is made by the authors themselves toward combining their disparate insights. As a result, the

reader is left with a hodgepodge of often unstated approaches to normativity, which may consequently disappoint legal theorists. On the other hand, it will certainly be of value to more policy-oriented scholarship and efforts focused on achieving sustainable development through the considered use of different forms of normativity.

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**Living in a Contaminated World: Community Structures, Environmental Risks and Decision Frameworks, Ellen Omohundro**, published by Ashgate, 2004, 206pp, £45.00, hardback.

In this book, Ellen Omohundro sets out to understand better community-level decision making concerning environmental risks. She explores, using qualitative research methods, how regulators, industry and communities together come to definitions and understandings of long-term environmental hazards with respect to two particular US Superfund<sup>1</sup> sites: the Dawn Mining Company operation on the Spokane Indian Reservation and in the town of Ford in Washington State (a former uranium extraction operation), and the Teledyne Wah Chung complex in Millersburg and Albany, Oregon (a metal alloy

producer). Omohundro's analysis is based on an extensive review of historical documents and several key informant interviews.

Omohundro's central argument is that there is an important role for shared history and community identity in decision making about environmental risks, and regulators would do well to pay more attention to these social factors in managing risk controversies. As she stresses, 'we experience risks not only as individuals but also as members of groups' (preface). In considering how social structures influence group behaviour and collective assessments of risk, Omohundro employs the *social amplification of risk* framework developed in the late 1980s. The social amplification of risk model proposes that 'risk events interact with psychological, social, and cultural processes in ways that can heighten or attenuate public perceptions of risk and related risk behavior'.<sup>2</sup> In other words, individuals form their ideas about risks as they interact with others and with the environment in the places they live, work and play (at 21).

Omohundro's cases demonstrate that current decision-making processes about locally based environmental risks – shared risks – can sometimes forge deep divisions within communities, making collective responses impossible. Still, despite the inability to formulate a collective response, and despite limited understandings and limited resources to manage these risks effectively, as Omohundro explains, these risks *perpetually occupy the landscape*.

My interest was piqued by Omohundro's early reference to Ulrich Beck's 'risk society' and her recognition of the situation that has led to the rise of the 'environmental justice' movement in the USA: that the

<sup>1</sup> The US Superfund programme operates under the legislative authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) 1980, 26 U.S.C. 4611–4682, under which parties that are found responsible for polluting a site must clean up the contamination or reimburse the Environmental Protection Agency for doing so. Activities include the authority to investigate, evaluate, and clean up hazardous waste sites identified on a national priorities list.

<sup>2</sup> See R.E. Kasperson *et al.*, 'The Social Amplification of Risk: A Conceptual Framework', 8:2 *Risk Analysis* (1988), 177, at 178–179.

pervasiveness of risk in contemporary society is not uniformly experienced, that 'some communities may be deliberately targeted for specific types of development and even undesirable land use' (at 1). She reviews a number of 'reasons' for why this may be true, citing some of the important American authors working on questions of environmental justice, including Robert Bullard and Vicki Been. The dynamics of race and class and how they play out with respect to environmental risks are all but dropped from her analysis at this early stage, however, despite the fact that they continue to simmer under the surface throughout the book.

Where she does an effective job of, for example, documenting the ways that pre-Columbus cultural traditions and experiences of 'colonization' by the indigenous tribes of the Spokane and Willamette Valleys have influenced their relationships with industry and environmental regulators, she has little to say about whether the community identifies on a broader level with the struggles of indigenous peoples more generally, or whether the concept of 'environmental justice' would resonate with their experiences. A potentially rich point of discussion and comparison, which was under-explored, derives from the fact that, in the case of the Dawn Mining Company, a significant stake in the industry was owned by Spokane Tribal members themselves after the 1954 discovery of uranium reserves on traditional lands by two tribal members. To the question, 'How does a uranium mine end up amidst a culture with close ecological and spiritual ties to the land like [the Spokane] Indian reservation?', Omohundro answers, 'Under the plague of chronic unemployment, limited development options, and only a cursory knowledge of the hazards associated with uranium extraction coupled with highly favorable market conditions in the 1950s, the relevant question became, why

not?' (at 85). Of course, prices for uranium quickly plummeted and the hazards quickly became clear – but while uranium mining ceased, the presence (and perception) of risk in the community, again, persists.

Further, even where the dynamics of race and class emerge clearly from the qualitative data, they are not picked up in any systematic way in Omohundro's analysis. For example, one key informant laments about the inability of the tribe to attract the attention and assistance of national environmental organizations (at 102) and another, making reference to a proposal to generate revenues for remediation efforts at a mine by importing 'select' hazardous materials (referred to as the 'New Jersey dirt'), stated: 'There is always the question of environmental genocide. I know it is a heavy name for it. But the way I see it countless times the powers of this nation have been all too happy to shuttle toxic and nuclear waste off to areas where Indians or poor people live . . .' (at 103).

Omohundro's focus on 'the community' as the unit of analysis, however, is appreciated. Because the only place that tribal members could continue 'traditional lifeways' was on the reservation, their ongoing connections to the contaminated lands was ensured. Omohundro demonstrates effectively how a failure to understand traditional lifestyles, including subsistence practices that may lead to under-examined routes of exposures through the food chain, often distorts the risk estimates of outside experts.

Omohundro is right that risk research has focused on 'individual risk perceptions, individual decision-making, expert opinions, and compliance' to the exclusion of questions about group dynamics, collective risk perceptions, and the significance of shared histories and community identities (at 4). But on the difficult questions of

what constitutes 'community', and the extent to which the underlying and under-acknowledged factors of race and class are constitutive of community identities, Omohundro's analysis falters.

On the other hand, a valuable contribution made by the book is the extensive documentation of the complexity of the relationship between the community and industry in the case of Teledyne Wah Chung. Omohundro works at unpacking complex bonds between industry, communities and environments that develop over time, and she details how industrial practices and facilities can become embedded in and are integral to local landscapes, cultures and senses of community identity.

Omohundro underlines the following important message: understanding environmental risk is 'not just about understanding contaminants', but about understanding how people, collectively, interact with their landscapes. She offers several practical recommendations for risk managers in this regard. The book also captures a key challenge plaguing many contemporary governments: the structure of the decision-making process about risks appears to seek 'primarily to inform, rather than actively involve community members' (at 107). This approach inhibits the conception of risk communication as a shared dialogue versus a one-way provision of information and knowledge.

My chief complaint about this book is that it adopts the social amplification of the risk model without any critical reflection on its assumptions and implications. The book does not even contain an explicit acknowledgement of the movement and revisions that have been made to the theory in response to its critics over the past decade or more by its own authors. For example, she concludes that a 'lack of recognition and understanding of the community's

shared history and identity [tends to] amplify existing conflicts' (at 129), and she lists eight factors that she argues 'function as risk amplifiers' in the case studies (at 140). The analysis on this point is theoretically shallow: while the social amplification of the risk model was intended to overcome the deep divisions that exist between the psychometric paradigm and cultural theories of risk, and the discursive and behaviorist strands of risk perception and communication studies, it is widely acknowledged that these tensions persist. Omohundro's study proceeds as if the social constructivist perspective and the social amplification of the risk model can be unproblematically integrated so as to develop a comprehensive set of instructions for regulators.

The main thesis of the social amplification model is that 'hazards interact with psychological, social, institutional and cultural processes in ways that may amplify or attenuate public responses to the risk or risk event'.<sup>3</sup> The social constructivists, of course, have criticized the amplification metaphor on the basis that it implies that a 'true' risk can be discerned (presumably by experts) and this risk is then 'distorted' through the process of social amplification. More recent research, even in the social amplification of risk mode, tends to take the position that although risks are undeniably real in their consequences, *all knowledge about risks* involves elements of judgement and social construction. Thus, it is not that Omohundro's project is fatally flawed, but that her treatment of the model lacks some theoretical nuance.

The other component that is lacking, and preventing Omohundro's important study from being as compelling as it could be, is a well-developed narrative. The organization of the book, beginning with a

chapter on theoretical orientation, followed by technical chapters on methods and Superfund procedures, combined with an overly strict organization of the case studies into sub-headings such as 'Hazard Ranking Scores for TWCA', prevents Omohundro from really conveying a coherent story about the communities whose well-being she is obviously very committed to. As a result, the reader is denied the opportunity to develop a meaningful sense of the ongoing struggles facing these communities and the significance of living, as Omohundro's title suggests, 'in a contaminated world'.

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**Water Resource Economics and Policy – An Introduction, W. Douglas Shaw, published Edward Elgar, 2005, 384pp, £79.95, hardback.**

This is an excellent textbook. It is eminently suitable for teaching students interested in the basic principles of water policy, and for teaching students majoring in economics and the intricacies of managing water.

The book is aimed at undergraduates in the USA. It is tailored to university education as practised in the USA and most examples draw from the US experience. Volume and flow measures are in US units. Indeed, non-US water issues are confined to a single, incomplete chapter; water resources shared by two or more sovereign countries are omitted, as is the role of water supply on development.

The book starts with a brief overview of the natural and legal aspects

of water, followed by a short review of basic micro-economics. The book then continues with separate chapters on water quality, residential water use, agricultural water use, uncertainty and risk, groundwater, recreational and environmental water use, floods, droughts and dams, non-US water issues, and a summary and outlook. Two further aspects are, however, missing: the role of water in international trade, and regulation of water quality and quantity.

The book is well written and very accessible. Calculus is kept to a minimum, with only the occasional use of constrained optimization and only one reference (in an appendix) to dynamic optimization in continuous time. But this is also a major shortcoming of the book. Only the groundwater chapter has some depth. The other chapters are superficial. This is particularly galling in the uncertainty and risk chapter, which does not go beyond computing mean and standard deviation. From the country of Humboldt, it is easy to preach the unity of education and research. Easy and futile, as German universities have been unable and unwilling to recognize that the 1920s are over and the world has moved on. Still, undergraduates who major in economics are singularly unprepared for academic research in economics. Reading Shaw's book, an experienced economist would come away with a good overview of the economic issues of water – and would be able to apply the rigorous tools of economics to analyse these issues. An inexperienced economist would be left wondering how to bring substance to so many assertions. A student of engineering or physics may be left with the impression that economics is as soft as the other social sciences. Douglas Shaw is an excellent scholar, who undoubtedly masters the technical details that this book hides. He cannot be blamed for the state of undergraduate

<sup>3</sup> Ibid.